



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 25 2014

REPLY TO THE ATTENTION OF:
WC-15J

CERTIFIED MAIL 7009 1680 0000 7678 5808
RETURN RECEIPT REQUESTED

Mr. Roger Buresh
Buresh Farms, LLC
E166 Highway 29
Luxemburg, Wisconsin 54217

Dear Mr. Buresh:

On November 6, 2013, the U.S. Environmental Protection Agency inspected Buresh Farms, LLC (Buresh Farms), located in Luxemburg, Wisconsin. The purpose of the inspection was to evaluate compliance with certain requirements of the Clean Water Act (CWA). Enclosed is a copy of EPA's inspection report.

The CWA prohibits the discharge of pollutants to the waters of the United States (U.S.) except in compliance with, among other things, a National Pollutant Discharge Elimination System (NPDES) permit. The improper management of manure and process wastewater generated at Concentrated Animal Feeding Operations (CAFOs) may result in a discharge of pollutants to waters of the U.S. Under the CWA, if an owner or operator of a CAFO discharges pollutants to waters of the United States, the owner or operator must seek coverage under an NPDES permit.

These CWA requirements help protect the nation's waters and human health. The unpermitted discharge of pollutants, including nitrogen, phosphorus, and bacteria contained in the manure and process wastewater, contribute to water quality impairment in U.S. surface waters. The discharge of manure and process wastewater may adversely impact ecosystems and human health and result in fish kills, algal blooms, fish advisories, contamination of drinking water sources and transmission of disease-causing bacteria and parasites.

As described in the enclosed inspection report, EPA identified areas of concern at Buresh Farms related to the improper management of manure and process wastewater. The improper management of this manure and process wastewater may result in a discharge of pollutants to tributaries of the Kewaunee River, a water of the U.S.

Assistance with constructing structures or development of Best Management Practices (BMPs) may be available through the Environmental Quality Incentives Program (EQIP). EQIP was reauthorized in the Agriculture Act of 2014 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land. EQIP is a competitive program. In order to sign up for EQIP, the Natural Resources Conservation Service (NRCS) must determine the applicant to be an eligible producer, and that the land is eligible. NRCS assistance is available at any U.S. Department of Agriculture Service Center. EQIP sign-up information is available online at: <http://www.wi.nrcs.usda.gov/programs/eqip.html>.

Additionally, we encourage you to contact the Kewaunee County Land and Water Conservation Department to discuss cost-effective measures you can take to control discharges of pollutants from the areas of concern we have identified.

At your earliest convenience, please contact Donald R. Schwer III of my staff, at (312) 353-8752 to confirm receipt of the enclosed inspection report and to set up a time for a conference to address any questions related to the areas of concern. We look forward to working with you.

Sincerely,



Dean Maraldo, Chief
Water Enforcement and Compliance Assurance Branch

Enclosure

CWA COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5

Purpose: Compliance Evaluation Inspection

Facility: Buresh Farms, LLC
E166 Highway 29
Luxemburg, Wisconsin 54217

NPDES Permit Number: NA

Date of Inspection: November 6, 2013

EPA Representatives: Donald R. Schwer III, Enforcement Officer
schwer.don@epa.gov, 312-353-8752

Rhiannon Dee, Program Assistant
312-886-4882

Facility Representatives: Joe Buresh, Owner
Exemption 6 and Exemption 7C

Roger Buresh, Owner

Report Prepared by: Donald R. Schwer III, Enforcement Officer

Report Date: February 12, 2014

Inspector Signature DRS

1. BACKGROUND

The purpose of this report is to describe, evaluate and document Buresh Farms, LLC compliance with the Clean Water Act (CWA) at its Luxemburg, Wisconsin facility on November 6, 2013. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended.

Buresh Farms is a medium Animal Feeding Operation (AFO) in Kewaunee County, Wisconsin. Buresh Farms housed approximately 525 milk cows, 75 heifers, and 60 calves in total confinement at the time of the inspection. Buresh Farms does not have a National Pollutant Discharge Elimination System (NPDES) permit allowing discharge from the site and the facility has never applied for one.

Surface runoff from Buresh Farms flows to an adjacent intermittent unnamed tributary on the north side of the facility. The intermittent unnamed tributary flows approximately 1 mile to perennial Scarboro Creek. Scarboro Creek flows approximately 12 miles to the Kewaunee River. The Kewaunee River flows approximately 14 miles to Lake Michigan a Traditional Navigable Water.

2. SITE INSPECTION

I arrived at Buresh at approximately 8:30 a.m. on November 6, 2013. I parked the vehicle near the entrance of the facility. The temperature was approximately 45° F and it was raining. The weather station USC00473268 in Green Bay, Wisconsin had an observed rainfall of 0.79 inches on November 5, 2013 and 0.62 inches on November 6, 2013. Upon arrival, Ms. Dee and I put on disposable boots. I introduced myself and presented my credentials to Mr. Joe Buresh and Mr. Roger Buresh who are owners/operators of Buresh Farms. I explained to them that I would be conducting a Concentrated Animal Feeding Operation (CAFO) inspection to evaluate their compliance status with the requirements of the CWA. I explained that the inspection would consist of a review of facility operations, required records, and a visual inspection of the site. I stated that I would document my findings and observations by making copies, taking photographs, and collecting samples if necessary. I explained Buresh Farm's right to make a claim of business confidentiality. They did not make any confidentiality claims at the time of the inspection. I asked if they had any biosecurity concerns. They said they did not have any biosecurity concerns.

2.1 Interview

The facility employs approximately 12 employees. The facility has consistently maintained the approximate number of cattle year round as described in Table 1 barring a setback in 2010 related to a barn fire.

Table 1: Facility Description

Type of Animal	Number of Animals	Type of Confinement
Cows (Milking +Dry)	525	Total
Calves (150 – 300 lbs)	75	Total
Calves (<150 lbs)	60	Total

Livestock Waste Management

Manure, bedding, and process wastewater from barns are scrapped and waste is transferred to the waste holding pond for Barn 1 and 2. Manure, bedding, and wastewater are maintained as bed pack under roof for Barn 3, 4, and 5. Waste drinking water and mist cooling system water are contained in the waste holding pond. The facility milks the cows three times per day. Plat cooling water is reused as drinking water. The milking parlor is cleaned by hose and power washed. The waste from the milking parlor is contained in the waste holding pond. The facility utilized recycled paper for bedding material. Bedding is collected in the waste holding pond or maintained as bed pack. Mortalities are picked up by the local mink ranch.

The waste holding pond has a storage capacity of approximately 3.8 million gallons or 8 months of storage. The waste storage pond is clay lined and was designed by the County Soil and Conservation department. The waste storage pond does not have a staff gauge and the levels of manure in the storage structures are not recorded. The waste holding pond was last pumped out approximately 3-4 weeks before the inspection. Approximately, 2.5 million gallons were pumped and land applied. The last manure sample was taken in the spring of 2013. Silage, haylage, and high moisture corn is maintained in feed bunkers. Runoff from feed bunkers is not contained at the facility. The facility maintains a nutrient management plan which was first developed in 1998 and is updated yearly.

Surface runoff from Buresh Farms flows to an adjacent intermittent unnamed tributary on the north side of the facility. Mr. Buresh said that the water way flows during heavy rainfall events and during the spring thaw.

2.2 Walkthrough of the Facility

To facilitate the walkthrough section of this report, overview images are included in Attachment 1 which includes building labels and waterway locations. The inspection photographs are in Attachment 2.

The facility walkthrough started at the farms machine shed/office at the entrance of the facility. We walked to the Milking Parlor and then to the Baby Calf Barn. We then walked through the West Cow Barn. We walked east between the Calf Barn and Cow Barn 2. I observed a stormwater pathway between Cow barn 2 and the Feed Bunker. The stormwater appeared clean in the pathway. We continued north along the calf barn and then east along the north end of the feed bunkers.

I observed a small quantity of silage leachate leaking from the north side wall of the Feed Bunker. The silage leachate was observed on the access road. This area drained north to the intermittent unnamed tributary. We continued east toward the east face of the Feed Bunkers. I observed track out of feed around the Feed Bunkers. The feed bunkers did not have a system to contain the process wastewater or feed leachate. Process wastewater surface runoff from the feed bunkers flowed east through an area in which equipment was stored and then through a field to the intermittent unnamed tributary. I observed the process wastewater runoff flowing through pathways and entering the intermittent unnamed tributary (IMGP0409). I observed feed solids along the pathway.

I then walked toward the waste holding pond. The waste holding pond was pumped down. I observed sloughing and erosion problems on the berms of the waste holding pond (IMGP0392-IMGP0395). I concluded the inspection walkthrough.

2.3 Closing Conference and Post-Inspection

At the conclusion of the inspection, I summarized my findings and observations to Mr. Joe and Roger Buresh. I expressed the following areas of concern:

1. The facility does not provide containment for process wastewater generated at the feed bunkers. The process wastewater flows from this area through pathways to the intermittent unnamed tributary.
2. The berms of the waste holding pond had areas which had erosion and sloughing of the liner material.

2.4 Sampling Information

Sampling was conducted at the production area to determine the presence of pollutants that could impact the applicable unnamed tributary. I offered to split samples with Mr. Buresh. Mr. Buresh declined splitting samples. Samples were tested for fecal coliform, biochemical oxygen demand (BOD), total dissolved solids (TDS), total suspended solids (TSS), ammonia nitrogen, nitrate- nitrite nitrogen, total Kjeldahl nitrogen (TKN), and total phosphorus (TP).

Sample S01 was taken at 9:45 a.m. of process wastewater pathway for all test parameters other than fecal coliform. Sample S02 was taken at 9:46 a.m. of process wastewater pathway for all test parameters other than fecal coliform. Sample S01 was taken at 9:55 a.m. for fecal coliform. Sample S02 was taken at 9:55 a.m. for fecal coliform. Sample BO1 was taken at 12:40 pm as a blank. Sampling locations can be seen in Attachment 1.

I took all samples. Samples were preserved at 10:10 a.m. according to the EPA Region 5 Field Sampling Plan. Sampling concluded at 10:25 a.m. Fecal coliform samples were transported to Pace Analytical Services, Inc. at 1241 Bellevue Street, Green Bay, Wisconsin. All other samples were hand delivered to the EPA Region 5 Chicago

Regional Laboratory. All samples met holding time according to the EPA Region 5 Field Sampling Plan developed for the inspection.

The results of the sampling, summarized in Table 2, indicate the Feed Bunkers contribute pollutants into the unnamed tributaries. Several forms of nitrogen are contained in the process wastewater samples, as indicated by the TKN, nitrate- nitrite nitrogen, and ammonia nitrogen sampling results. Total Phosphorus, TDS, and TSS were present in the samples. The laboratory results are in Attachment 3.

Table 2: Field Sampling Results

Sample ID	Fecal Coliform (CFU/100ml)	Biochemical Oxygen Demand (BOD)	Total Kjeldahl Nitrogen (TKN)		Nitrate- Nitrite Nitrogen (mg/L)	Ammonia Nitrogen (mg/L)	Total Phosphorus (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Total Suspended Solids (TSS) (mg/L)
S01	TNTC	2300	104		1.77	21.8	25.7	2360	1210
S02	TNTC	2400	135		1.73	22.4	26.8	2260	1130
B01	<1	U	U		U	0.04	U	U	U

U-Undetectable, TNTC- Too Numerous to Count,

3. AREAS OF CONCERN

EPA observed these areas of concern whereby pollutants have the potential to reach waters of the United States:

1. The facility does not provide containment for process wastewater generated at the feed bunkers. The process wastewater flowed from this area through pathways to the intermittent unnamed tributary.
2. The berms of the waste holding pond had areas which had erosion and sloughing of the liner material.

LIST OF ATTACHMENTS

1. Aerial Photograph of Buresh Farms
2. Inspection Photographs
3. Field Sampling Results

ATTACHMENT 1



Figure 1: Buersh Farms Aerial Photograph

ATTACHMENT 2: Inspection Photographs



IMGP0392.JPG

Location: Buresh Farms

Photographer: Rhiannon Dee

Camera Direction: West

Description: The banks of the Wastewater Storage Facility were sloughing and eroding in some spots.



IMGP0393.JPG

Location: Buresh Farms

Photographer: Rhiannon Dee

Camera Direction: West

Description: The banks of the Wastewater Storage Facility were sloughing and eroding in some spots.



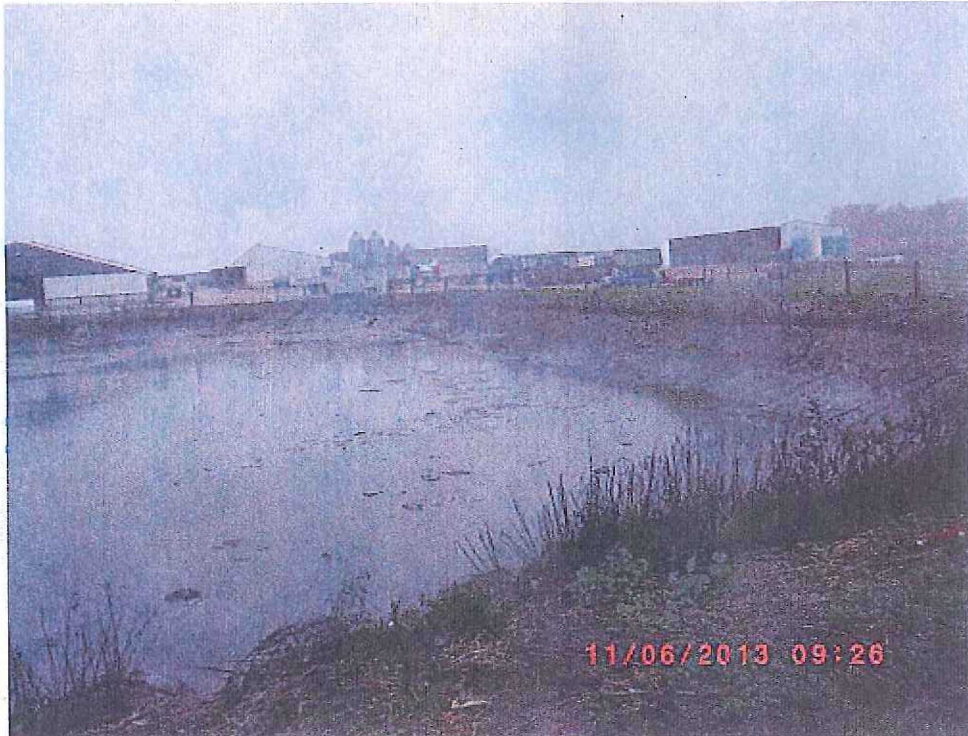
IMGP0394.JPG

Location: Buresh Farms

Photographer: Rhiannon Dee

Camera Direction: West

Description: The banks of the Wastewater Storage Facility were sloughing and eroding in some spots.



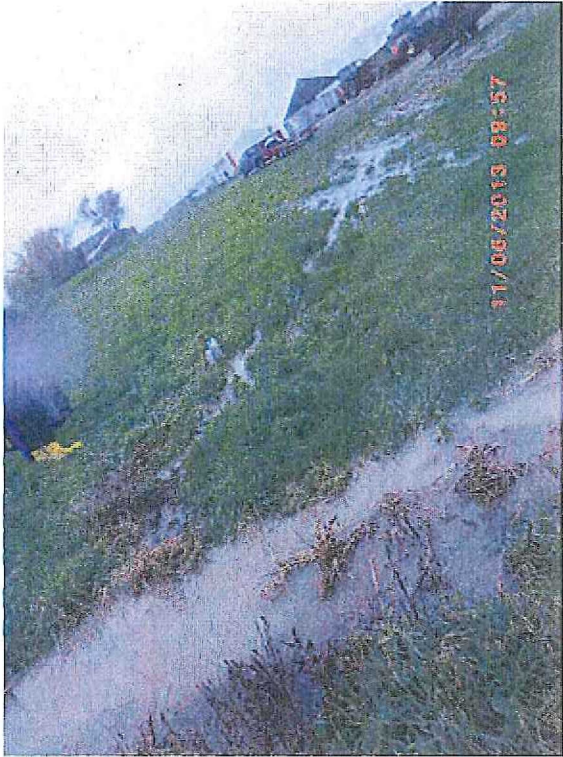
IMGP0395.JPG

Location: Buresh Farms

Photographer: Rhiannon Dee

Camera Direction: West

Description: The banks of the Wastewater Storage Facility were sloughing and eroding in some spots.



IMGP0409.JPG

Location: Buresh Farms

Photographer: Rhiannon Dee

Camera Direction: Southwest

Description: The runoff pathway that contained process wastewater from the Silage Storage Area enters the unnamed tributary to Scarboro Creek.

ATTACHMENT 3: Field Sampling Results



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



Date: 1/24/2014
Subject: Review of Region 5 Data for Buresh
From: Laurence Wong, Analyst *LW*
Region 5 Chicago Regional Laboratory
To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Buresh

_____/_____/_____
Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

Solids, TDS



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

ANALYSIS CASE NARRATIVE

Analyst Phone number: 312-353-8418

General Information

Three (3) samples under Work Order #1311006 were received on November 07, 2013 for Total Dissolved Solids (TDS) analysis. The sample holding time limit was met. The designated analyst for these samples was Laurence Wong (phone number: 312-353-8418). Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample preparation and analysis followed procedure CRL SOP AIG017 r5.0 (Standard Method 2540 C). The preparation and analysis began on November 12, 2013, and were completed on November 15, 2013. The samples were kept in refrigerator at $\leq 6^{\circ}\text{C}$ at all time except when needed for the analysis.

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.

Signature

Laurence Wong

Date

January 24, 2014

LW *1/24/14*
Laurence Wong, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1311006-01	Water	Nov-06-13 09:45	Nov-07-13 10:05
S02	1311006-02	Water	Nov-06-13 09:46	Nov-07-13 10:05
B01	1311006-03	Water	Nov-06-13 10:08	Nov-07-13 10:05

Dissolved Solids, SM 2540C (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1311006-01) Water Sampled: Nov-06-13 09:45 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	2360			20.0	mg/L	1	B311054	Nov-12-13	Nov-12-13

S02 (1311006-02) Water Sampled: Nov-06-13 09:46 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	2260			20.0	mg/L	1	B311054	Nov-12-13	Nov-12-13

B01 (1311006-03) Water Sampled: Nov-06-13 10:08 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	U			20.0	mg/L	1	B311054	Nov-12-13	Nov-12-13

2W 1/24/14
Laurence Wong, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buersh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

Notes and Definitions

U Not Detected
NR Not Reported

Laurence Wong, Analyst



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



LABORATORY
ACCREDITATION
BUREAU

ACCREDITED ISO/IEC 17025

Certificate # L2230 Testing

Date: 1/24/2014

Subject: Review of Region 5 Data for Buresh

From: Laurence Wong, Analyst *LW*
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

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Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Buresh

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

Solids, TSS



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

ANALYSIS CASE NARRATIVE

Analyst Phone number: 312-353-8418

General Information

Three (3) samples under Work Order #1311006 were received on November 7, 2013 for Total Suspended Solids (TSS) analysis. The sample holding time limit was met. The designated analyst for these samples was Laurence Wong (phone number: 312-353-8418). Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample preparation and analysis followed procedure CRL SOP AIG018 r4.0 (Standard Method 2540 D). The preparation and analysis began on November 12, 2013, and were completed on November 13, 2013. The samples were kept in refrigerator at $\leq 6^{\circ}\text{C}$ at all time except when in use.

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.

Signature

Laurence Wong

Date

January 24, 2014

Laurence Wong
Laurence Wong, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1311006-01	Water	Nov-06-13 09:45	Nov-07-13 10:05
S02	1311006-02	Water	Nov-06-13 09:46	Nov-07-13 10:05
B01	1311006-03	Water	Nov-06-13 10:08	Nov-07-13 10:05

Total Suspended Solids, SM 2540 D (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1311006-01) Water Sampled: Nov-06-13 09:45 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	1210			5	mg/L	1	B311055	Nov-12-13	Nov-12-13

S02 (1311006-02) Water Sampled: Nov-06-13 09:46 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	1130			5	mg/L	1	B311055	Nov-12-13	Nov-12-13

B01 (1311006-03) Water Sampled: Nov-06-13 10:08 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	U			5	mg/L	1	B311055	Nov-12-13	Nov-12-13

zw 1/24/14
Laurence Wong, Analyst



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Chicago Regional Laboratory

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Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

NOTES and DEFINITIONS

U Not Detected
NR Not Reported

LW 1/24/14

Laurence Wong, Analyst



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



Date: 1/24/2014

Subject: Review of Region 5 Data for Buresh

From: Nidia Fuentes, Analyst *NF*
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Buresh

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

TKN DA

Total Phosphorus DA



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

Analysis Case Narrative

General Information

A total of three water samples to be analyzed for Total Phosphorus (TP) were received at the Chicago Regional Laboratory on November 7, 2013. Holding time was met. The designated analyst for the sample is Nidia Fuentes. Nidia can be reached at 312-353-9079.

Supportive data such as instrument raw data, reagents preparation sheet and miscellaneous items are filed with work order 1311005.

Sample Analysis and Results

The samples for TP were digested and analyzed using CRL SOP AIG034A, Revision # 3.7 (EPA method 365.4).

Quality Control

All quality control audits were within the CRL's limits, with the exception of the matrix spike.

Matrix spike : Sample 1311006-02 (S02) matrix spike recovery is invalid because the spike was diluted out. No flagged will be applied under this circumstances.

Analyst Signature

Nidia Fuentes

Date

1/24/14

Analysis Case Narrative

General Information

A total of three water samples to be analyzed for Total Kjeldahl Nitrogen (TKN) were received at the Chicago Regional Laboratory on November 7, 2013. All holding times were met. The designated analyst for these samples is Nidia Fuentes. Nidia can be reached at 312-353-9079.

NF
Nidia Fuentes, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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Water Division, US EPA Region 5
77 West Jackson Boulevard
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Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

Supportive data such as instrument raw data, reagents preparation sheet and miscellaneous items are filed with work order 1311005.

Sample Analysis and Results

The samples for TKN were digested and analyzed using CRL SOP AIG035A, Revision # 3.0 (EPA method 351.2).

Quality Control

All quality control audits were within the CRL limits with the exception of the matrix spike.

Matrix spike : Sample 1311006-02 (S02) matrix spike recovery is not valid because the spike was diluted out. No flagged will be applied under this circumstances.

Analyst Signature Nidia Fuentes Date 1/24/14

Nidia Fuentes, Analyst



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Chicago Regional Laboratory

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Water Division, US EPA Region 5
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Project: Buresh
Project Number: DS20141
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Reported:
Jan-17-14 09:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1311006-01	Water	Nov-06-13 09:45	Nov-07-13 10:05
S02	1311006-02	Water	Nov-06-13 09:46	Nov-07-13 10:05
B01	1311006-03	Water	Nov-06-13 10:08	Nov-07-13 10:05


Nidia Fuentes, Analyst



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Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

Phosphorus, Colorimetric, EPA 365.4 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1311006-01) Water Sampled: Nov-06-13 09:45 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	25.7		0.60	1.50	mg/L	10	B311073	Nov-20-13	Nov-21-13

S02 (1311006-02) Water Sampled: Nov-06-13 09:46 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	26.8		3.00	7.50	mg/L	50	B311073	Nov-20-13	Nov-21-13

B01 (1311006-03) Water Sampled: Nov-06-13 10:08 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	U		0.06	0.15	mg/L	1	B311073	Nov-20-13	Nov-21-13

Nidia Fuentes, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

Total Kjeldahl Nitrogen, EPA 351.2 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1311006-01) Water Sampled: Nov-06-13 09:45 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	104		3.00	5.00	mg/L	10	B311074	Nov-20-13	Nov-21-13

S02 (1311006-02) Water Sampled: Nov-06-13 09:46 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	135		3.00	5.00	mg/L	10	B311074	Nov-20-13	Nov-21-13

B01 (1311006-03) Water Sampled: Nov-06-13 10:08 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	U		0.30	0.50	mg/L	1	B311074	Nov-20-13	Nov-21-13

Nidia Fuentes, Analyst



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Jan-17-14 09:10

Notes and Definitions

U Not Detected
NR Not Reported

Nidia Fuentes, Analyst

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12.2005
	TKN DA	(Water)	J-Flags used
	TKN DA	(Water)	Result calculations based on MDL
	TKN DA	(Water)	RPD calculations based on %Recovery
	Total Phosphorus DA	(Water)	J-Flags used
	Total Phosphorus DA	(Water)	Result calculations based on MDL
	Total Phosphorus DA	(Water)	RPD calculations based on %Recovery
B311073-MS1	Total Phosphorus DA	Total Phosphorus	Exceeds lower control limit
B311073-MS1	Total Phosphorus DA	Total Phosphorus	Spike less than MDL
B311074-MS1	TKN DA	Total Kjeldahl Nitrogen	Exceeds lower control limit
B311074-MS2	TKN DA	Total Kjeldahl Nitrogen	Spike less than MDL

Sample, Log and Extraction Comments

1311006-01
TKN DA

pH = 2
pH = 2

Total Phosphorus DA

pH = 2
pH = 2

1311006-02
TKN DA

pH = 2
pH = 2

Total Phosphorus DA

pH = 2
pH = 2

1311006-03
TKN DA

pH = 2
pH = 2

Total Phosphorus DA

pH = 2
pH = 2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



Date: 12/19/2013

Subject: Review of Region 5 Data for Buresh

From: Colin Breslin, Chemist
Region 5 Chicago Regional Laboratory CB 12/19/13

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Buresh

Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

BOD



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Dec-19-13 11:18

Analysis Case Narrative

General Information

Three water samples for the analysis of 5-day biochemical oxygen demand (BOD5) were received at the Chicago Regional Laboratory (CRL) on November 07, 2013. All samples were analyzed within the 48 hour hold time. The designated analyst, Colin Breslin, can be reached at 312-886-2912.

Sample Analysis and Results

The samples were prepared and analyzed according to CRL SOP AIG006, Revision No: 4.0 (SM 5210B) and an approved CRL Pen&Ink Change (Reference No: AIG006 R4.0 - PI01). Samples results for 1311006-01 (S01) and 1311006-02 (S02) were flagged "J - The identification of the analyte is acceptable; the reported value is an estimate". See below under Quality Control for an explanation. For sample 1311006-03 (B01), the final dissolved oxygen (DO) readings did not result in valid final depletions of at least 2 mg/L DO below the initial DO values for all dilution levels analyzed. The sample result for 1311006-03 (B01) was reported as "U - not detected" at the reporting limit of 2 mg/L BOD5.

Quality Control

All Quality Control (QC) audits were within CRL limits for the requested analytes or did not result in qualification of the data.

Laboratory Control Samples (LCS):

The glucose-glumatic acid (GGA) check standards were recovered at 71% and 66%, which were both below the lower control limit of 84.6%. Low recovery of the GGA check standard may indicate a weak seed solution. Because the GGA recoveries were below the lower control limit the results for samples 1311006-01 (S01), 1311006-02 (S02) were flagged "J". This was the only impact expected for the overall dataset from this QC excursion.

CB 12/19/13
Colin Breslin, Chemist



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Dec-19-13 11:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1311006-01	Water	Nov-06-13 09:45	Nov-07-13 10:05
S02	1311006-02	Water	Nov-06-13 09:46	Nov-07-13 10:05
B01	1311006-03	Water	Nov-06-13 10:08	Nov-07-13 10:05

BOD, 5 day, SM 5210 B (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1311006-01) Water Sampled: Nov-06-13 09:45 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	2300	J		2	mg/L	1	B311044	Nov-07-13	Nov-07-13

S02 (1311006-02) Water Sampled: Nov-06-13 09:46 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	2400	J		2	mg/L	1	B311044	Nov-07-13	Nov-07-13

B01 (1311006-03) Water Sampled: Nov-06-13 10:08 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	U			2	mg/L	1	B311044	Nov-07-13	Nov-07-13

CB 12/19/13

Colin Breslin, Chemist



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Dec-19-13 11:18

Notes and Definitions

- J The identification of the analyte is acceptable; the reported value is an estimate.
U Not Detected
NR Not Reported

CB 12/19/13

Colin Breslin, Chemist

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified) VERSION 6.12:2005
B311044-BS1	BOD	Biochemical Oxygen Demand	Exceeds lower control limit
B311044-BS2	BOD	Biochemical Oxygen Demand	Exceeds lower control limit

CB 12/19/13

Sample, Log and Extraction Comments

1311006-01
BOD

pH = 6
pH = 6

1311006-02
BOD

pH = 6
pH = 6

1311006-03
BOD

pH = 5
pH = 5

CB 12/19/13

November 14, 2013

Kimberly O'Neill
SAIC
McLean/Enterprise Center
8301 Greensboro Drive
Mc Lean, VA 22102

RE: Project: DS2014 BURESH
Pace Project No.: 4087928

Dear Kimberly O'Neill:

Enclosed are the analytical results for sample(s) received by the laboratory on November 06, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Steven Mleczo

steve.mleczo@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: DS2014 BURESH

Pace Project No.: 4087928

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 11888

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: DS2014 BURESH
Pace Project No.: 4087928

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4087928001	S01 CONFLUENCE	Water	11/06/13 09:55	11/06/13 10:53
4087928002	S02 CONFLUENCE	Water	11/06/13 09:55	11/06/13 10:53
4087928003	BO1 BLANK	Water	11/06/13 10:08	11/06/13 10:53

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: DS2014 BURESH

Pace Project No.: 4087928

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4087928001	S01 CONFLUENCE	SM 9222D	DEY	1
4087928002	S02 CONFLUENCE	SM 9222D	DEY	1
4087928003	BO1 BLANK	SM 9222D	DEY	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DS2014 BURESH
Pace Project No.: 4087928

Sample: S01 CONFLUENCE Lab ID: 4087928001 Collected: 11/06/13 09:55 Received: 11/06/13 10:53 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9222D MICRO Fecal Coli by MF Analytical Method: SM 9222D Preparation Method: SM 9222D									
Fecal Coliforms	TNTC	CFU/100 mL	1.0	1.0	1	11/06/13 15:05	11/06/13 15:05		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DS2014 BURESH

Pace Project No.: 4087928

Sample: S02 CONFLUENCE		Lab ID: 4087928002	Collected: 11/06/13 09:55		Received: 11/06/13 10:53		Matrix: Water		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9222D MICRO Fecal Coli by MF Analytical Method: SM 9222D Preparation Method: SM 9222D									
Fecal Coliforms	TNTC	CFU/100 mL	1.0	1.0	1	11/06/13 15:05	11/06/13 15:05		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DS2014 BURESH
Pace Project No.: 4087928

Sample: BO1 BLANK Lab ID: 4087928003 Collected: 11/06/13 10:08 Received: 11/06/13 10:53 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9222D MICRO Fecal Coli by MF Analytical Method: SM 9222D Preparation Method: SM 9222D									
Fecal Coliforms	<1	CFU/100 mL	1.0	1.0	1	11/06/13 15:05	11/06/13 15:05		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: DS2014 BURESH

Pace Project No.: 4087928

QC Batch: MBIO/3185

Analysis Method: SM 9222D

QC Batch Method: SM 9222D

Analysis Description: 9222D MICRO Fecal Coliform by MF

Associated Lab Samples: 4087928001, 4087928002, 4087928003

METHOD BLANK: 893626

Matrix: Water

Associated Lab Samples: 4087928001, 4087928002, 4087928003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	<1	1.0	11/06/13 15:05	

METHOD BLANK: 893628

Matrix: Water

Associated Lab Samples: 4087928001, 4087928002, 4087928003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	<1	1.0	11/06/13 15:05	

METHOD BLANK: 893629

Matrix: Water

Associated Lab Samples: 4087928001, 4087928002, 4087928003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fecal Coliforms	CFU/100 mL	<1	1.0	11/06/13 16:50	

SAMPLE DUPLICATE: 893627

Parameter	Units	4087928001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fecal Coliforms	CFU/100 mL	TNTC	TNTC			1q

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: DS2014 BURESH
Pace Project No.: 4087928

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1q All plates were too numerous to count.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DS2014 BURESH

Pace Project No.: 4087928


Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4087928001	S01 CONFLUENCE	SM 9222D	MBIO/3184	SM 9222D	MBIO/3185
4087928002	S02 CONFLUENCE	SM 9222D	MBIO/3184	SM 9222D	MBIO/3185
4087928003	BO1 BLANK	SM 9222D	MBIO/3184	SM 9222D	MBIO/3185

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302


Pace Analytical™

Project #:

WO#: 4087928Client Name: Environmental Protection AgencyCourier: ☐ Fed Ex ☐ UPS ☒ Client ☐ Pace Other: _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ noCustody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ noPacking Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____Thermometer Used N/A Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☒ Samples on ice, cooling process has begunCooler Temperature Uncorr: ROT Corr: _____ Biological Tissue is Frozen: ☐ yesTemp Blank Present: ☐ yes ☒ no ☐ no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Person examining contents:

Date: 11-6-13Initials: SW

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>Feal</u> <u>11-6-13</u> <u>SW</u>
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
- Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>No date or time on samples.</u> <u>11-6-13 BK</u>
- Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤ 2; NaOH + ZnAct ≥ 9, NaOH ≥ 12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, (coliform) TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lab Std #/ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 11/6/13



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



Date: 11/15/2013

Subject: Review of Region 5 Data for Buresh

From: Anna Aleszczyk, Chemist *AA*
Region 5 Chicago Regional Laboratory

To: Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Buresh

_____/_____/_____
Data Management Coordinator and Date Received

Date Transmitted: ____/____/____

Analyses included in this report:

Ammonia N DA, Distilled

Nitrate-Nitrite N DA



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buersh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Nov-15-13 13:49

ANALYSIS CASE NARRATIVE – Distilled Ammonia Nitrogen in Water

Work Order: 1311006
Analyst: Anna Aleszczyk
Phone #: (312) 353-9467

General Information

Three water samples for Ammonia Nitrogen were received on November 7, 2013. All holding times were met.

Sample Analysis and Results

The samples were distilled on November 12, 2013 and analyzed on November 13, 2013 for Ammonia Nitrogen in water using CRL SOP AIG029A, Revision # 2.1 (Reference Method, Standard Method 4500 – NH₃- B & G). The samples were stored in the refrigerator at all times, except when in use.

Quality Control

Matrix Spike (MS)

The matrix spike recovery (53 %) for sample 1311006-01 (S01) was below the acceptance criteria (59 – 132 %). The blank spike (BS) recovery (114 %) and all other QC audits were within the CRL limits. There may be some matrix interference and the reported value may be biased low. The sample result was flagged "L" (biased low).

All other quality control audits were within CRL limits or did not result in qualification of the data.

ANALYSIS CASE NARRATIVE – Nitrate-Nitrite Nitrogen in Water

Work Order: 1311006
Analyst: Anna Aleszczyk
Phone #: (312) 353-9467

General Information

Three water samples for Nitrate-Nitrite Nitrogen were received on November 7, 2013. All holding times were met.

Sample Analysis and Results

AA 11-15-13
Anna Aleszczyk, Chemist



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Nov-15-13 13:49

The samples were analyzed for Nitrate-Nitrite Nitrogen in water on November 12, 2013 using CRL SOP AIG031A, Revision #1.0 (Standard Method 4500 – NO₃- E). The samples were stored in the refrigerator at all times except when in use. Samples 1311006-01 (S01) and 1311006-02 (S02) were centrifuged prior to analysis to remove particulates.

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Nov-15-13 13:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1311006-01	Water	Nov-06-13 09:45	Nov-07-13 10:05
S02	1311006-02	Water	Nov-06-13 09:46	Nov-07-13 10:05
B01	1311006-03	Water	Nov-06-13 10:08	Nov-07-13 10:05

AA 11-15-13

Anna Aleszczyk, Chemist



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591



Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buresh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Nov-15-13 13:49

Ammonia Nitrogen, SM4500B & G (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1311006-01) Water Sampled: Nov-06-13 09:45 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	21.8	L	0.30	1.00	mg/L	10	B311053	Nov-12-13	Nov-13-13

S02 (1311006-02) Water Sampled: Nov-06-13 09:46 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	22.4		0.30	1.00	mg/L	10	B311053	Nov-12-13	Nov-13-13

B01 (1311006-03) Water Sampled: Nov-06-13 10:08 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	0.04	J	0.03	0.10	mg/L	1	B311053	Nov-12-13	Nov-13-13

ATA 11-15-13

Anna Aleszczyk, Chemist



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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Water Division, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Buersh
Project Number: DS20141
Project Manager: Don Schwer

Reported:
Nov-15-13 13:49

Nitrate - Nitrite Nitrogen, SM 4500E (modified)

US EPA Region 5 Chicago Regional Laboratory

S01 (1311006-01) Water Sampled: Nov-06-13 09:45 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	1.77		0.07	0.25	mg/L	1	B311050	Nov-12-13	Nov-12-13

S02 (1311006-02) Water Sampled: Nov-06-13 09:46 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	1.73		0.07	0.25	mg/L	1	B311050	Nov-12-13	Nov-12-13

B01 (1311006-03) Water Sampled: Nov-06-13 10:08 Received: Nov-07-13 10:05

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	U	U	0.07	0.25	mg/L	1	B311050	Nov-12-13	Nov-12-13

AA 11-15-13

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Nov-15-13 13:49

Notes and Definitions

- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- U Not Detected
- NR Not Reported

AA 11-15-13

Anna Aleszczyk, Chemist

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.12:2005
	Ammonia N DA, Distilled	(Water)	J-Flags used
	Ammonia N DA, Distilled	(Water)	Result calculations based on MDL
	Nitrate-Nitrite N DA	(Water)	J-Flags used
	Nitrate-Nitrite N DA	(Water)	Result calculations based on MDL
	Nitrate-Nitrite N DA	(Water)	U-Flags used
1311006-01	Ammonia N DA, Distilled	Ammonia as N	L: The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
B311053-MS1	Ammonia N DA, Distilled	Ammonia as N	Exceeds lower control limit
B311053-MS2	Ammonia N DA, Distilled	Ammonia as N	Exceeds upper control limit

Sample, Log and Extraction Comments

1311006-01

Ammonia N DA, Distilled

pH = 2

pH = 2

Nitrate-Nitrite N DA

pH = 2

pH = 2

1311006-02

Ammonia N DA, Distilled

pH = 2

pH = 2

Nitrate-Nitrite N DA

pH = 2

pH = 2

1311006-03

Ammonia N DA, Distilled

pH = 2

pH = 2

Nitrate-Nitrite N DA

pH = 2

pH = 2

